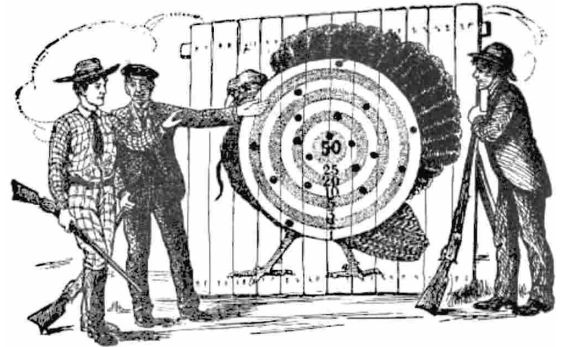


Problem N: Thanksgiving Turkey

A group of three friends participated in a turkey shoot on Thanksgiving Day. It was for a prize of a fat turkey and they all tied their scores after six shots each.

That night over dinner, none of them could remember the exact scores of their shots, but they somehow managed to figure them out, taking into account that they all made the same overall score of 71 points.



The turkey shooting game

Three players (**A**, **B** and **C**) take six shots each. If you know the scores of all the shots taken, and the overall scores of the three players, find out which shots may have been made by each player.

The i th shot ($1 \leq i \leq 6$) of player X will be denoted X_i . If there is more than one valid arrangement of the shots for the three players, choose the one in which the sequence of values $(A_1, A_2, \dots, A_6, B_1, \dots, B_6, C_1, \dots, C_6)$ is the first from all the alternatives sorted in ascending lexicographical order.

Input

Input starts with a positive integer **T**, that denotes the number of test cases.

The first line of a test case contains three integers: **S_A**, **S_B**, **S_C**, the overall scores of the three players.

The second line contains a list of 9 integers; these numbers correspond to the number of shots that scored 0, 1, 2, 3, 5, 10, 20, 25 and 50 points, in that order. The sum of these 9 numbers will always be 18.

You can also assume that the sum of the scores of all shots is equal to $S_A + S_B + S_C$ and that there is always a valid solution.

$$T \leq 1000 ; 0 \leq S_A, S_B, S_C \leq 300$$

Output

For each test case, print the case number, followed by three lines containing the scores of the shots for the three players.

The first line must have the shots $A_1 \dots A_6$, the second line $B_1 \dots B_6$ and the third line $C_1 \dots C_6$. All the scores must be separated by single spaces. See the samples below for more details.

Sample Input	Output for Sample Input
2 71 71 71 0 3 2 2 2 3 3 2 1 58 56 64 0 2 2 4 3 1 3 3 0	Case 1: 1 2 3 5 10 50 1 2 3 20 20 25 1 5 10 10 20 25 Case 2: 1 1 3 3 25 25 3 3 5 5 20 20 2 2 5 10 20 25